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09/840,208	04/23/2001	Christiaan Jacob Martens	NL000217	7398

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EXAMINER

GLASS, CHRISTOPHER W

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 11/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/840,208

Applicant(s)

MARTENS ET AL.

Examiner

Christopher W. Glass

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Title*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Response to Arguments*

2. At the top of page 9 of the applicant's remarks filed September 10, 2002, an on-line physics reference is cited, which states that "two mirrors placed at an acute angle to one another produce a kaleidoscopic effect, with multiple images formed". Applicant argues that the claimed invention contrasts with the Keller reference (U.S. Patent No. 4,087,688) because the means of Keller does not produce, or is not intended to produce, a kaleidoscopic effect (pages 8 and 9). The examiner respectfully disagrees. Configurations which produce a kaleidoscopic effect are well within the express teaching of Keller, which states that while the cross-section of the internally reflective housing 2 can be square, circular, or rectangular (Column 3, lines 50-53), the cross-section can also be "polygonal in shape, so that a multi-sided prism is formed" (Column 3, lines 55-56). The examiner holds that "polygonal in shape" clearly includes polygons having less than four sides, which inherently possess two or more sides at acute angles to one another. Such a configuration would obviously fit the above-cited functional requirements for producing a kaleidoscopic effect.

Applicant further argues that the claimed invention is patentable over the Keller reference in combination with the teaching of U.S. Patent No. 5,103,346 to Chang. Again, the examiner respectfully disagrees. The Keller reference expressly teaches each of the aspects of the claimed invention, with the exception of the shape of the cross-section of the mirror assembly varying

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from a smallest to a largest cross-section along its longitudinal axis. Applicant points out that the external, and not the internal surfaces of the means of Chang are used in reflection.

However, the Chang reference was specifically incorporated in the initial claim rejections because it establishes that a varying cross-section along the longitudinal axis is well known in the art. Applicant on page 10 specifically concedes that "his (Chang) signal detector indeed includes a deflector with triangular cross-section which varies in size from one surface (63) to another", and it is therefore maintained that the aspect of claim 8 is an obvious modification of the Keller reference for these and the reasons stated in the previous office action.

It should also be noted that the inclusion of the limitation "the mirror assembly constituting an elongate body whose reflecting surface faces inwards" (claim 1) does not differentiate the claimed invention from prior art, since Keller specifically and repeatedly teaches that the reflective surfaces **10** or **11** of the mirror assembly **2** are internally reflective (see Column 2, lines 25-33, Column 3, lines 57-64, and Column 4, lines 17-24).

On page 11 the applicant argues that the Keller reference, when combined with the teaching of Yung, does not make unpatentable the applicant's invention, and in particular the aspects of claim 10. The examiner respectfully disagrees. Yung specifically teaches that a movement detector can be mounted in a ceiling (see Column 2, lines 50-53) and while it does not expressly disclose any particular arrangement of the housing relative to the ceiling, such as the housing being adjusted so that parts of the detection structure would extend through the ceiling, the examiner holds that these are obvious to one having ordinary skill in the art. It is therefore maintained that the following rejection of all pending claims is deemed proper.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,3-5,7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,087,688 to Keller.

Regarding claim 1: Keller shows in Figure 3 a movement detector which is capable of detecting movement of a body in a space and includes a light-sensitive sensor 5 and optical means 2,3,11 which are capable of projecting a multiple image of the space onto the sensor 5, characterized in that the optical means 2,3,11 include a mirror assembly 2, the mirror assembly constituting an elongate body whose reflecting surface faces inwards (see Column 2, lines 25-33, Column 3, lines 57-64, and Column 4, lines 17-24), the mirror assembly having a kaleidoscopic effect.

Regarding claim 3: The optical means 2,3,11 of the movement detector of Keller comprises a "collecting lens 3 serving as a focusing optical system" (Column 3, lines 22-23).

Regarding claim 4: As shown in Figure 3, the sensor 5 is situated near a first end of the mirror assembly 2, whereas the lens 3 is situated near the second end of the mirror assembly.

Regarding claim 5: The cross-section of the mirror assembly 2 forms a rectangular polygon (see Figure 3 and Column 3, lines 46-56).

Regarding claim 7: The movement detector of Keller shows in Figure 3 the cross-section of the mirror assembly 2 as being essentially the same along the entire longitudinal axis.

Regarding claim 9: The sensor 5 includes an infrared sensor (see Column 3, lines 38-45).

*Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller, in view of U.S. Patent No. 5,103,346 to Chang. The disclosure of Keller cites that the "foregoing cross-section (of mirror assembly 2) can (instead) be selected to be also polygonal in shape, so that a multi-sided prism is formed" and although a cross-sectional formation of essentially a triangle is not expressly disclosed, this arrangement is well known in the art (Column 3, lines 54-56). Figures 1,3 and 4 of Chang show a triangle-shaped deflector employed in a radiation sensitive detector device. The detector device is shown as comprising a sensor 5, sensor housing 66, lens 3, and detecting opening 23 disposed around the signal deflector 6. Specifically disclosed in Figure 4, the triangle-shaped mirror deflector 6, having reflective surfaces 61,62,64,65, and common edge 82, deflects incident radiation to the sensor device 5 within sensor housing 66, as to provide a 180-degree detecting range. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the cross-section of the mirror assembly 2 of the device of Keller in an essentially-triangular manner, in order to effectively deflect radiation from a wide range of incident angles to the sensor 5, as taught by Chang. It also would have been obvious to construct the mirror assembly 2 to have the cross-section vary from a smallest to a largest cross-section along the longitudinal axis, since Keller



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teaches the possibility of several polygonal formations for this element, in order to offer this same advantage of deflecting radiation from a wide range of incident angles.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller, in view of U.S. Patent No. 5,717,203 to Yung. Keller shows in Figure 3 a movement detector having a sensor **5** and optical means **2,3,11** arranged in such a manner that they project a multiple image of the space onto the sensor **5**, characterized in that the optical means **2,3,11** include a mirror assembly **2** having a kaleidoscopic effect. Keller does not expressly disclose installing the movement detector (comprising mirror assembly **2**, detector **5**, and optical means **3,11**) in a space such that the sensor **5** is arranged above a ceiling of the space and the mirror assembly **2** extends essentially through the ceiling. However, it is well known to mount motion detectors in ceiling arrangements. Yung discloses in Figures 1,2,5, and 6 an infrared motion detector with 180-degree detecting range, comprising optical means (including focusing lens **20**, housing **12**, and deflector unit **30** having reflective prism surfaces **35**), and an infrared sensor **40**. The "housing structure **12** (is) connected to a base **14** with an articulated arm system **16** such that its orientation can be adjusted even after the base **14** is attached to a fixture such as a wall or a ceiling" (Column 2, lines 50-53). It would have been obvious, therefore, to one having ordinary skill in the art at the time the invention was made, to mount the device of Keller such that the light sensor **5** was arranged above a ceiling of a space, and such that the mirror assembly **2** extends essentially through the ceiling, in order to provide a high level of visibility for detecting movement, as of burglars, in a space. It further would have been obvious to mount some or the majority of this device within the ceiling, concealing all but the necessary optical receiving

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elements from obvious sight, for cosmetic reasons or in order to provide an inconspicuous means of surveillance.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher W. Glass whose telephone number is 703-305-1980. The examiner can normally be reached 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached at 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



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November 21, 2002



STEPHONE ALLEN  
PRIMARY EXAMINER